NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Raleigh Regional Office
County: Chatham
NC Facility ID: 1900039
Inspector's Name: Steven Carr
Date of Last Inspection: 03/09/2017
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Boise Cascade Wood Products, LLC - Moncure

Facility Address:
Boise Cascade Wood Products, LLC - Moncure
306 Corinth Road
Moncure, NC 27559

SIC: 2436 / Softwood Veneer And Plywood
NAICS: 321212 / Softwood Veneer and Plywood Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 02D .0516, 02D .0521
NSPS: NSPS IIII
NESHAP: GACT ZZZZ
PSD: N/A
PSD Avoidance: N/A
NC Toxics: N/A
112(r): N/A
Other: N/A

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Brian van Gelder Eastern Regional Environmental Manager (803) 385-4957 306 Corinth Road Moncure, NC 27559	Glen Lang Southeast Operations Manager (803) 385-4935 306 Corinth Road Moncure, NC 27559	Brian van Gelder Eastern Regional Environmental Manager (803) 385-4957 306 Corinth Road Moncure, NC 27559

Application Data

Application Number: 1900039.18B
Date Received: 01/30/2018
Application Type: Modification
Application Schedule: TV-Significant

Existing Permit Data
Existing Permit Number: 03424/T26
Existing Permit Issue Date: 01/23/2018
Existing Permit Expiration Date: 12/31/2019

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2016	0.6500	40.82	64.64	33.94	58.81	13.12	6.72 [Methanol (methyl alcohol)]
2015	0.7100	44.84	63.28	26.61	60.73	13.26	7.09 [Methanol (methyl alcohol)]
2014	0.7600	48.06	71.40	30.06	59.85	15.21	8.32 [Methanol (methyl alcohol)]
2013	0.7000	44.14	63.30	29.28	66.40	10.84	4.23 [Methanol (methyl alcohol)]
2012	3.55	38.94	51.77	27.29	57.64	13.35	5.98 [Methanol (methyl alcohol)]

Review Engineer: Betty Gatano

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue 03424/T27
Permit Issue Date:
Permit Expiration Date:

1. Purpose of Application

Boise Cascade Wood Products, LLC - Moncure (Boise Cascade) currently holds Title V Permit No. 103424T26 with an expiration date of December 31, 2019 for a plywood manufacturing facility located in Moncure, Chatham County, North Carolina. On January 30, 2018, the facility submitted a significant modification under 15A NCAC 02Q .0501(b)(1) to permit the diesel-fired fire pump emergency engine (ID No. IES-23) as non-emergency generator (ID No. ES-23).

2. Facility Description

Boise Cascade, which is located in Moncure, Chatham County, North Carolina, manufactures plywood from primarily hardwood (gum and poplar) veneer and pine veneer. The plywood ranges from 3 to 9 plies, and from $^{11}/_{32}$ -inch to 1 $^{1}/_{4}$ -inch thick. The facility receives trees, cuts them to length (8 feet) blocks, and debarks the blocks. The bark is hammer milled, transferred to silos, and used as wood fuel. The logs are heated in steam vats for about 6-8 hours to condition. The logs are then sent to a spindle lathe. The lathe peels continuous, thin sheets of veneer from each block. The core of the log is sold to customers to make various products. Wood chips are made from veneer that cannot be processed into a plywood panel and sold to other wood products or paper facilities. The veneer is cut into varying sizes and then dried in dryers. Glue is applied at the lay-up line where the veneer is arranged to make a panel of plywood. Finally, the panels are pressed in the plywood presses. The plywood is then sawed to specifications and stacked for sale. Most of the plywood is used to construct upholstered furniture. The actual production of the plywood typically occurs six days/week. Presently, there are 171 employees at the facility.

3. Application Chronology

January 30, 2018	Received application for permit modification.
February 2, 2018	Sent acknowledgment letter indicating that the application was complete.
February 22, 2018	Betty Gatano sent an e-mail to Libby Robinson, consultant for the facility, regarding emission calculations from the engine.
February 23, 2018	Ms. Gatano sent a second e-mail to Ms. Robinson requesting a certificate of conformity for the fire pump demonstrating the fire pump can comply with the emission limits for a non-emergency generator.
March 26, 2018	Ms. Gatano e-mailed Ms. Robinson requesting a response to the previous e-mails. Ms. Robinson responded that same day stating the facility is working on the response.
April 13, 2018	Ms. Robinson called Betty Gatano to provide more detail on the reason for changing the fire pump to a non-emergency generator. According to Ms. Robinson, the fire pump exceeded 50 hours of operation in non-emergency situations during 2017, requiring the engine to be permitted as a non-emergency generator. Ms. Robinson further explained that facility will continue to operate the engine as fire pump and not as a non-emergency generator.

	Mr. Robinson followed up the call with an e-mail providing information about the fire pump and the certification. The fire pump engine is smaller than originally permitted. It is 190 BHP (142 kW).
April 13, 2018	Ms. Gatano e-mailed Brian Van Gelder of Boise Cascade and requested more information about the event that caused the fire pump to exceed 50-hour limit for non-emergency operation.
April 19, 2018	Mr. Van Gelder e-mailed Ms. Gatano and provided a description of the triggering event. That same day Ms. Gatano followed up with Mr. Van Gelder regarding the hours of operation in a non-emergency capacity for the fire pump.
May 9, 2018	Mr. Van Gelder provided the requested information.
May 23, 2018	DAQ issued letter indicating the fire pump could remain an emergency engine and requesting a withdrawal of the permit application.
May 31, 2018	The Raleigh Regional Office (RRO) issued a Notice of Deficiency (NOD) for Boise Cascade for exceeding 50 hours of operation in non-emergency situations during 2017.
June 19, 2018	Ms. Gatano sent an e-mail to Mr. Van Gelder requesting a letter withdrawing the permit application. Mr. Van Gelder responded via phone and indicated the facility had exceeded 50 hours of operation in non-emergency situations during 2018 due to not being as diligent in shutting down the engine after low water pressure events. Mr. Van Gelder also indicated the facility will be purchasing a larger electronic jockey-pump to prevent the engine from tripping on during low water pressure events.
June and July 2018	Throughout June and July 2018, DAQ staff continued discussing operation of the fire pump at Boise Cascade.
July 24, 2018	Staff from the Central Office and the RRO met to discuss the engine. Staff concluded the fire pump engine could meet the emission limits specified in NSPS Subpart IIII for a non-emergency generator.
August 8, 2018	Received letter from Boise Cascade requesting a waiver of testing for the non-emergency generator. The letter also requested to move forward with the permit application for the non-emergency generator.
August 17, 2018	Draft permit and permit review forwarded internally for comments.
August 21, 2018	Comments received from Matt Mahler and Charles McEachern of the RRO.
August 22, 2018	Comments received from Mark Cuilla, Permitting Supervisor.
August 30, 2018	Draft permit and permit review forwarded to facility for comments.

September 25, 2018 Received comments from Mr. Van Gelder.

September 28, 2018 DAQ issued an applicability determination to Boise Cascade indicating the initial performance testing is not required for the non-emergency generator (ID No. ES-23).

October 2, 2018 Draft permit and permit review forwarded to public notice.

4. Permit Modifications/Changes and TVEE Discussion

The table below list changes to the current permit under this modification.

Pages	Section	Description of Changes
Cover page and Throughout	-	Updated all dates and permit revision numbers.
Insignificant Activities	--	Removed the diesel-fired fire pump emergency engine (ID No. IES-23).
3	1.0 Equipment List	Added the diesel-fired non-emergency generator (ID No. ES-23). Corrected the generators size to 190 bhp.
3 – 18	Throughout Section 2.1	Removed all reference to 15A NCAC 02D .0958 and updated cross references as required. The rule is no longer applicable state-wide, effective November 1, 2016.
16 – 18	2.1 D	Added section for regulations applicable to the diesel-fired non-emergency generator (ID No. ES-23).
--	2.2 B	• Removed permit condition for 15A NCAC 02D .0958. The rule is no longer applicable state-wide, effective November 1, 2016. • Renumbered the permit accordingly.
23	Section 3	Updated the General Conditions to the most recent revision (V5.3 08/21/2018).
32	Attachment	Updated the list of acronyms.

The diesel-fired fire pump emergency engine (ID No. IES-23) will be changed to a non-emergency generator (ID No. ES-23) (190 hp output) in the Title V Equipment Editor (TVEE) as part of this permit modification.

5. Background

The diesel-fired fire pump emergency engine (ID No. IES-23) is a 190 horsepower maximum output engine used for emergency purposes only. This fire pump was added to the insignificant activities list in Air Permit No. 03424T24 issued on January 21, 2015.

The fire pump is subject to the "NESHAP for Stationary Reciprocating Internal Combustion Engines," 40 CFR Part 63 Subpart ZZZZ (GACT Subpart ZZZZ or the RICE GACT) and "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," 40 CFR Part 60 Subpart IIII (NSPS Subpart IIII). Both these rules allow emergency engines to operate up to 100 hours per year for maintenance and testing and emergency demand response. The rules also allow emergency engines to operate up to 50 hours per calendar year in non-emergency situations. The 50 hours must be counted as part of the 100 hours for testing, maintenance, and demand response. 40

CFR 63.6640(f) of the RICE GACT states the following (Note - similar language is found in 40 CFR 60.4211 (f) of NSPS IIII):

> (f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, **the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.** [emphasis added]

The reason the fire pump was being changed to a non-emergency generator was not clear in the permit application. After discussions with the facility's consultant, DAQ learned the engine exceeded 50 hours operation in non-emergency situations during 2017. Although Boise Cascade does not intend to operate the fire pump as a non-emergency generator, the facility assumed the fire pump could no longer be considered an emergency engine because of the language in the rule.

The event that caused the fire pump to exceed the 50-hour threshold was a fire event. The fire pump starts when water pressure in the fire sprinkler system drops below a threshold level, in this case approximately 115 psi. The fire pump runs until shut off by personnel at the facility. An audible alarm also accompanies the start of the fire pump. The alarm warns staff of a possible fire, makes staff aware the fire pump is operating, and reminds staff to shutoff the fire pump when it is no longer needed.

The audible alarm malfunctioned during this event, and the fire pump operated until it ran out of fuel. The fire pump operated approximately 60 hours during the event, for a total of about 86 total hours for non-emergency use in 2017.

The DAQ reviewed the operation of the fire pump at Boise Cascade during 2017 and initially concluded the fire pump is not required to be permitted as a non-emergency generator under the RICE MACT and NSPS IIII. The event that triggered the 50-hour exceedance was clearly inadvertent and is not indicative of typical operation of the fire pump. The triggering event began as an emergency (i.e., a fire event), and the fire pump operated appropriately during the emergency. Operation was only allowed to continue due to a malfunction in the alarm system and staff over sight. Had the alarm not malfunctioned, the 50-hours allowed for non-emergency operations would not have been exceeded for the year. The DAQ issued a letter on May 23, 2018, requesting the facility to withdraw the permit application.

In June of 2018, Brian Van Gelder of Boise Cascade contacted Betty Gatano of DAQ and indicated the fire pump had exceeded 50 hours of operation in non-emergency situations during 2018. He stated staff has not been as diligent in shutting down the engine after low water pressure events. Mr. Van Gelder also indicated the facility will be purchasing a larger electronic jockey-pump for the engine to prevent the fire pump from tripping on as frequently during low water pressure events.

This situation prompted additional discussion among DAQ staff and Boise Cascade on how the fire pump should be permitted. Staff concluded the fire pump engine could meet the emission limits specified in NSPS Subpart IIII for a non-emergency generator. The fire pump is a certified 2013

engine. The emission limits for the non-emergency generator for this year as specified in 40 CFR 60.4204(b) (40 CFR 89.112) are the same as for the fire pump (Table 4 in 40 CFR Part 60 Subpart IIII for fire pumps). Therefore, the fire pump certification is sufficient to ensure compliance as a non-emergency generator. Ultimately, Boise Cascade decided to permit the fire pump as a non-emergency generator as requested in permit application No. 1900039.18B, and Boise Cascade requested via letter dated August 1, 2018 to move forward with the permit application.

6. Emissions

Emissions from the non-emergency generator were calculated using the DAQ spreadsheet for small engines, with 8760 hours of operation assumed for the engine. The emissions are provided in the following table, and emission calculations are provided in Attachment 1. As shown in the table, all emissions are less than major source levels for PSD. Thus, this modification does not trigger a PSD analysis.

Pollutant	Potential Emissions (tpy)
PM	1.83
PM10	1.83
PM2.5	1.83
Sulfur dioxide	1.01
Nitrogen oxides	25.8
Carbon monoxide	5.56
VOC	2.09
Highest HAP (Formaldehyde)	13.7 lb/yr
Total HAPs	44.7 lb/yr

Notes:

- Emissions calculated from NC DAQ's "Gas & Diesel Internal Combustion Engines with a Power Rating of <= 600 HP for Diesel Engines and <= 250 HP for Gasoline Engines Emission Calculator Revision S" 06/22/2015.
- Operation for a 190 bhp output engine, assuming 8,760 hours of operation and a sulfur content in the fuel of 0.15%.

PCS is Chatham County, NC and the PSD minor baseline dates have been triggered for Chatham County for NO_X, SO_2, and PM_{10} emissions. This modification will result in an increase of 0.42 pounds per hour of PM_{10}; 0.23 pounds per hour of SO_2; and 5.89 pounds per hour of NO_x, as shown in the table below.

Pollutants	Total Project Emissions (ton/yr)	Increase in Emissions (lb/hr)
NOx	25.8	5.89
SO2	1.01	0.23
PM10	1.83	0.42

Operating the fire pump as a non-emergency generator will result in an increase in emissions of certain toxic air pollutants (TAPs). Because the engine is subject to a GACT, it is exempt from NC

Air Toxics in accordance with 15A NCAC 02Q .0702(a)(27). However, the DAQ must evaluate TAP emissions from the engine to demonstrate that operating the engine as a non-emergency generator would not present "an unacceptable risk to human health," in accordance with G.S. 143-215. 107(b) as codified on May 1, 2014.

As a first step, emissions of TAPs from the engine operating at 8,760 hours per year were compared to their respective toxic permitting emission rate (TPERS). TAP emissions are provided in Attachment 1. Benzene was the only TAPs that exceeded its TPER and was evaluated further.

Moncure Plywood, LLC, which was the previous owner of the facility, conducted modeling in 2009 for the veneer dryers (ID Nos. ES09 and ES10) and glue and pressing operations to demonstrate compliance with NC Air Toxics. The emission rates used in the modeling were optimized at 98% of the acceptable ambient level (AAL), and the modeled emission rates were included in the permit as emission limits for the dryers.

Emissions of benzene were compared with previously modeled emissions to determine if this modification poses an unacceptable risk to human health. The highest actual emissions of these TAPS within the last five years was added to potential emissions from the engines to arrive at total emissions used in this evaluation. Total emissions of benzene (Facility-Wide Actual + Potential from the engine) are less than the emissions limits for the dryers, as shown in the table below. Thus, the increased emissions in benzene from operating the fire pump as a non-emergency generator does not pose an unacceptable risk to human health.

TAP	Facility-Wide Actual Emissions	Potential Emissions from Engine	Total Emissions	Permitted Limit for Dryers
Benzene	216.5 lb/yr	10.9 lb/yr	227.4 lb/yr	772.92 lb/yr, each 1545.84 lb/yr, total

Notes:

- Highest actual emissions of benzene occurred in calendar year 2012, as reported in the DAQ emission inventory.
- Potential emissions from the engine were calculated from NC DAQ's "Gas & Diesel Internal Combustion Engines with a Power Rating of <= 600 HP for Diesel Engines and <= 250 HP for Gasoline Engines Emission Calculator Revision S" 06/22/2015.
- Operation for a 190 bhp output engine, assuming 8,760 hours of operation and a sulfur content in the fuel of 0.15%.

7. Regulatory Review

The non-emergency generator (ID No. ES-23) is subject to the following regulations:

- 15A NCAC 02D .0516, Sulfur Dioxide from Combustion Sources – The engine is subject to 02D .0516. No monitoring, recordkeeping, or reporting (MRR) is required when firing diesel fuel in this engine because of the low sulfur content of the fuel. This fuel is inherently low enough in sulfur that continued compliance is expected.

- 15A NCAC 02D .0521, Control of Visible Emissions – The engine is subject to 02D .0521. No MRR is required when firing diesel fuel in this engine, as no visible emission are expected. Continued compliance is anticipated.

- 15A NCAC 02D .0524, New Source Performance Standards (NSPS) – The engine is subject to "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," 40 CFR Part 60 Subpart IIII (NSPS Subpart IIII).

  In accordance with 40 CFR 60.4204(b) for 2007 later model year compression ignition engines, the engine must meet emission standards in 40 CFR 89.112 as referenced in 40 CFR 60.4201. The emission standards (Tier 3) for this engine are provided in Table 1 in 40 CFR 89.112 and are provided below:

Maximum Engine Power	Model Year	NMHC + NOx (g/kW-h)	CO (g/kW-h)	PM (g/kW-h)
130≤ KW≤ 225 175≤ HP ≤ 300	2006 (Tier 3)	4.0	3.5	0.20

  Compliance is ensured by purchasing an engine certified to the emission standards in 40 CFR 89.112 and conducting inspection and maintenance as required per 40 CFR 60.4206 and 40 CFR 60.4211(a). By operating the fire pump for more than 50 hours in non-emergency situations, Boise Cascade was not able to operate and maintain the stationary engine according to the manufacturer's emission-related written instructions as required in 60.4211(a)(1). Therefore, the facility must meet requirements under 40 CFR 60.4211(g)(2), which states the following:

  > (g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:
  >
  > …
  >
  > (2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer

  Because the emission limits for a fire pump are the same as a non-emergency engine, the facility has requested to waive the emission testing in a letter dated August 1, 2018. On September 28, 2018, the DAQ issued an applicability determination to Boise Cascade indicating the initial performance testing is not required for the non-emergency generator (ID No. ES-23).

  The permit condition for NSPS Subpart IIII is provided in Attachment 2 to this permit review.

- 15A NCAC 02D .1111, Maximum Achievable Control Technology (MACT) – The engine is subject to "Stationary Reciprocating Internal Combustion Engines," 40 CFR Part 63 Subpart ZZZZ. The engine is considered a new engine under GACT Subpart ZZZZ because Boise Cascade commenced construction on this engine on or after June 12, 2006. In accordance with 40 CFR 63.3590(c)(1), a new RICE located an area source of HAPs meets the requirements of GACT Subpart ZZZZ by complying with the requirements of 40 CFR Part 60 Subpart IIII. No other requirements apply to the engine under GACT Subpart ZZZZ.

  The permit condition for GACT Subpart ZZZZ is provided in Attachment 2 to this permit review.

On November 1, 2016, amendments to 15A NCAC 02D .0902 for VOC emissions were finalized to narrow applicability of work practice standards in 15A NCAC 02D .0958 from statewide to the maintenance area for the 1997 8-hour ozone standard. This change is being made primarily because the abundance of biogenic VOC emissions in North Carolina results in ozone formation being limited by the amount of available NOx emissions. Provisions of the Clean Air Act require VOC requirements previously implemented in an ozone nonattainment area prior to redesignation remain in place. However, facilities outside the maintenance area counties for the 1997 8-hour ozone standard would no longer be required to comply with the work practice standards in 15A NCAC 02D .0958. Chatham County has never been in nonattainment for ozone, and 15A NCAC 02D .0958 is no longer applicable to facilities, including Boise Cascade, within the county. Although the engine is not subject to 15A NCAC 02D .0958, the permit condition for 15A NCAC 02D .0958 will be removed from the permit under this modification because it is no longer applicable to Boise Cascade.

8. NSPS, NESHAPS/MACT, NSR/PSD, 112(r), CAM

NSPS

The facility is subject to NSPS as discussed below.

40 CFR Part 60, Subpart Dc

Boiler (ID No. ES01-B) is subject to NSPS for "Small Industrial, Commercial, Institutional Steam Generating Units," 40 CFR Part 60 Subpart Dc, because the boiler commenced construction after June 9, 1989 and has a maximum design heat input capacity of less than 100 million Btu per hour but greater than or equal to 10 million Btu per hour. As required by NSPS Subpart Dc and incorporated into the permit, the facility is required to record the amount of wood fuel fired in the source during each month. No changes to the permit are required under this modification, and continued compliance is anticipated.

40 CFR Part 60, Subpart IIII

The diesel-fired, non-emergency generator (ID No. ES-23) is subject to the notification, testing, recordkeeping, and reporting requirements of "Performance Standards for Stationary Compression Ignition Internal Combustion Engines," 40 CFR Part 60 Subpart IIII, as noted previously. The diesel-fired water pump (ID No. IES-19) was installed before July 11, 2005 and therefore is not subject to the requirements of 40 CFR Part 60, Subpart IIII.

NESHAPS/MACT

Boise Cascade has accepted an avoidance condition to limit facility-wide emissions of HAPs to 10 tons per year of any individual HAP and 25 tons per year any combination of HAPs. With these

emission limits, the facility is considered an area source of HAPs. This permit modification does not affect the facility's HAP status.

40 CFR Part 63 Subpart ZZZZ

The diesel-fired non-emergency generator (ID No. ES-23) was constructed after June 10, 2006 and is considered a new source under GACT Subpart ZZZZ. As specified in 40 CFR 63.6590(c), the facility meets the requirements of GACT Subpart ZZZZ by meeting the requirements of NSPS Subpart IIII for this engine. No further requirements under GACT Subpart ZZZZ apply.

The diesel-fired water pump (ID No. IES-19) was constructed before June 10, 2006 and is considered an existing source under GACT Subpart ZZZZ. The facility must meet work practice standards under GACT Subpart ZZZZ for this engine.

40 CFR Part 63 Subpart JJJJJJ

On March 21, 2011, the US EPA issued the "Industrial, Commercial, and Institutional Boilers Area Source Rule," 40 CFR Part 63 Subpart JJJJJJ (6J). Per 40 CFR 63.11195(e), gas-fired boilers as defined under 40 CFR 63.11237 are not subject to GACT Subpart 6J. Boiler ES01-B is considered to be gas-fired boiler (i.e., fuel is based on slipstream gas from wood burner (ID No. ES01-A)) and, as such, is exempt from GACT 6J.

PSD

Boise Cascade is classified as a PSD minor source. This modification will not affect the PSD status of the facility.

112(r)

The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. This modification does not affect this status.

CAM

40 CFR Part 64 is applicable to any pollutant-specific emission unit, if the following three conditions are met:

- the unit is subject to any (non-exempt: e.g. pre November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- the unit's precontrol potential emission rate exceeds either 100 tpy (for criteria pollutants) or 10/25 tpy (for HAPs).

Control devices that are subject to CAM include the multicyclone (ID No. CD02), cyclones (ID Nos. CD-03-WWTC and CD18), bagfilters (ID Nos. CD05 and CD06), and cartridge filter (ID No. CD21). This modification does not affect CAM status of the facility.

9. Facility Wide Air Toxics Pollutants (State Enforceable Only)

Per 15A NCAC 02D .1100 for Control of TAPs, the facility has demonstrated a large margin of compliance with a modeling demonstration submitted on March 18, 2009. Therefore, no monitoring,

recordkeeping or reporting is required for this regulation. This permit modification does not affect these permit conditions, and continued compliance is anticipated.

11. Compliance Status

Steven Carr of the RRO conducted the most recent inspection on March 9, 2017. The facility was observed to be in apparent compliance during the inspection. Additionally, a signed Title V Compliance Certification (Form E5) indicating the facility was in compliance with all applicable requirements was included with the application for permit modification.

Five-Year Compliance History

- On June 5, 2014, a Notice of Deficiency (NOD) was issued to the facility for not maintaining records for the required five years.
- On August 10, 2015, a Notice of Violation (NOV) was issued to the facility for not performing a stack test within the required time frame. The required performance test was subsequently completed on June 30, 2016 and the report was submitted on July 29, 2016. The result of the test indicated compliance with 15A NCAC 02D .0515.
- On March 30, 2018, a NOD was issued to the facility for exceeding 50 hours of operation for an emergency engine.

The NODs and the NOV have all been resolved.

12. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above. Virginia and Forsyth County Office of Environmental Assistance and Protection are affected areas within 50 miles of this facility and will be notified accordingly.

13. Other Regulatory Considerations

- A P.E. seal is NOT required for this application.
- A zoning consistency is not required for this application.
- A permit fee of $947 is required and was submitted with the permit application.

14. Recommendations

The permit application for Boise Cascade Wood Products, LLC, Moncure, Chatham County, NC has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 03424T27.

Attachment 1

Calculation of Emissions from the Non-emergency generator (ID No. ES-23)

GAS & DIESEL INTERNAL COMBUSTION ENGINES EMISSIONS CALCULATOR REVISION S 6/22/2015 - OUTPUT SCREEN

Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed/printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. DENR does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. DENR is not responsible for errors or omissions that may be contained herein.

SOURCE / FACILITY / USER INPUT SUMMARY (FROM INPUT SCREEN)

COMPANY:	**Boise Cascade**					FACILITY ID NO.:	1900039
						PERMIT NUMBER:	03424T26
EMISSION SOURCE DESCRIPTION:	190 HP POWER OUTPUT, DIESEL INTERNAL COMBUSTION ENGINE					FACILITY CITY:	Moncure
EMISSION SOURCE ID NO.:	ES-23					FACILITY COUNTY:	Chatham
SPREADSHEET PREPARED BY:	BLG					POLLUTANT	CONTROL EFF.
ACTUAL THROUGHPUT	8,760	HRS OF OPERATION	FUEL HEATING VALUE:	140000	BTU/GAL	PM	0
REQUESTED ANNUAL LIMITATION	8,760	HRS OF OPERATION	CALCULATIONS:	0.138	mm BTU/GAL	PM10	0
SULFUR CONTENT OF DIESEL FUEL (%)	0					PM2.5	0
METHOD USED TO COMPUTE ACTUAL GHG EMISSIONS:	TIER 1: DEFAULT HIGH HEAT VALUE AND DEFAULT EF					SO2	0
CARBON CONTENT USED FOR GHGS (kg C/gal):	CARBON CONTENT NOT USED FOR CALCULATION TIER CHOSEN					NOX	0
						CO	0
						VOC	0

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION

	ACTUAL EMISSIONS (AFTER CONTROLS / LIMITS)		POTENTIAL EMISSIONS (BEFORE CONTROLS/LIMITS)		POTENTIAL EMISSIONS (AFTER CONTROLS/LIMITS)		EMISSION FACTOR lb/hp-hr
AIR POLLUTANT EMITTED	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	uncontrolled
PARTICULATE MATTER (PM)	0.42	1.83	0.42	1.83	0.42	1.83	2.20E-03
PARTICULATE MATTER<10 MICRONS (PM_{10})	0.42	1.83	0.42	1.83	0.42	1.83	2.20E-03
PARTICULATE MATTER<2.5 MICRONS ($PM_{2.5}$)	0.42	1.83	0.42	1.83	0.42	1.83	2.20E-03
SULFUR DIOXIDE (SO2)	0.23	1.01	0.23	1.01	0.23	1.01	1.21E-03
NITROGEN OXIDES (NOx)	5.89	25.80	5.89	25.80	5.89	25.80	3.10E-02
CARBON MONOXIDE (CO)	1.27	5.56	1.27	5.56	1.27	5.56	6.68E-03
VOLATILE ORGANIC COMPOUNDS (VOC)	0.48	2.09	0.48	2.09	0.48	2.09	2.51E-03

TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION

	CAS	ACTUAL EMISSIONS (AFTER CONTROLS / LIMITS)		POTENTIAL EMISSIONS (BEFORE CONTROLS / LIMITS)		POTENTIAL EMISSIONS (AFTER CONTROLS / LIMITS)		EMISSION FACTOR lb/hp-hr
TOXIC / HAZARDOUS AIR POLLUTANT	NUMBER	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	uncontrolled
Acetaldehyde (H,T)	75070	1.02E-03	8.94E+00	1.02E-03	8.94E+00	1.02E-03	8.94E+00	5.37E-06
Acrolein (H,T)	107028	1.23E-04	1.08E+00	1.23E-04	1.08E+00	1.23E-04	1.08E+00	6.48E-07
Arsenic unlisted compounds (H,T)	ASC-Other	5.32E-06	4.66E-02	5.32E-06	4.66E-02	5.32E-06	4.66E-02	2.80E-08
Benzene (H,T)	71432	1.24E-03	1.09E+01	1.24E-03	1.09E+01	1.24E-03	1.09E+01	6.53E-06
Benzo(a)pyrene (H,T)	50328	2.50E-07	2.19E-03	2.50E-07	2.19E-03	2.50E-07	2.19E-03	1.32E-09
Beryllium metal (unreacted) (H,T)	7440417	3.99E-06	3.50E-02	3.99E-06	3.50E-02	3.99E-06	3.50E-02	2.10E-08
1,3-Butadiene (H,T)	106990	5.20E-05	4.56E-01	5.20E-05	4.56E-01	5.20E-05	4.56E-01	2.74E-07
Cadmium metal (elemental unreacted) (H,T)	7440439	3.99E-06	3.50E-02	3.99E-06	3.50E-02	3.99E-06	3.50E-02	2.10E-08
Chromic Acid (VI) (H,T)	7738945	3.99E-06	3.50E-02	3.99E-06	3.50E-02	3.99E-06	3.50E-02	2.10E-08
Formaldehyde (H,T)	50000	1.57E-03	1.37E+01	1.57E-03	1.37E+01	1.57E-03	1.37E+01	8.26E-06
Lead unlisted compounds (H)	PBC-Other	1.20E-05	1.05E-01	1.20E-05	1.05E-01	1.20E-05	1.05E-01	6.30E-08
Manganese unlisted compounds (H,T)	MNC-Other	7.98E-06	6.99E-02	7.98E-06	6.99E-02	7.98E-06	6.99E-02	4.20E-08
Mercury vapor (H,T)	7439976	3.99E-06	3.50E-02	3.99E-06	3.50E-02	3.99E-06	3.50E-02	2.10E-08
Napthalene (H)	91203	1.13E-04	9.88E-01	1.13E-04	9.88E-01	1.13E-04	9.88E-01	5.94E-07
Nickel metal (H,T)	7440020	3.99E-06	3.50E-02	3.99E-06	3.50E-02	3.99E-06	3.50E-02	2.10E-08
Selenium compounds (H)	SEC	2.00E-05	1.75E-01	2.00E-05	1.75E-01	2.00E-05	1.75E-01	1.05E-07
Toluene (H,T)	108883	5.44E-04	4.77E+00	5.44E-04	4.77E+00	5.44E-04	4.77E+00	2.86E-06
Xylene (H,T)	1330207	3.79E-04	3.32E+00	3.79E-04	3.32E+00	3.79E-04	3.32E+00	2.00E-06
Highest HAP (Formaldehyde)	50000	1.57E-03	1.37E+01	1.57E-03	1.37E+01	1.57E-03	1.37E+01	8.26E-06
Total HAPs		5.11E-03	4.47E+01	5.11E-03	4.47E+01	5.11E-03	4.47E+01	

TOXIC AIR POLLUTANT EMISSIONS INFORMATION (FOR PERMITTING PURPOSES)

		EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS			EMISSION FACTOR lb/hp-hr
TOXIC AIR POLLUTANT	CAS Num.	lb/hr	lb/day	lb/yr	uncontrolled
Acetaldehyde (H,T)	75070	1.02E-03	2.45E-02	8.94E+00	5.37E-06
Acrolein (H,T)	107028	1.23E-04	2.95E-03	1.08E+00	6.48E-07
Arsenic unlisted compounds (H,T)	ASC-Other	5.32E-06	1.28E-04	4.66E-02	2.80E-08
Benzene (H,T)	71432	1.24E-03	2.98E-02	1.09E+01	6.53E-06
Benzo(a)pyrene (H,T)	50328	2.50E-07	6.00E-06	2.19E-03	1.32E-09
Beryllium metal (unreacted) (H,T)	7440417	3.99E-06	9.58E-05	3.50E-02	2.10E-08
1,3-Butadiene (H,T)	106990	5.20E-05	1.25E-03	4.56E-01	2.74E-07
Cadmium metal (elemental unreacted) (H,T)	7440439	3.99E-06	9.58E-05	3.50E-02	2.10E-08
soluble chromate compounds, as chromium (VI) equivalent	SOLCR6	3.99E-06	9.58E-05	3.50E-02	2.10E-08
Formaldehyde (H,T)	50000	1.57E-03	3.77E-02	1.37E+01	8.26E-06
Manganese unlisted compounds (H,T)	MNC-Other	7.98E-06	1.92E-04	6.99E-02	4.20E-08
Mercury vapor (H,T)	7439976	3.99E-06	9.58E-05	3.50E-02	2.10E-08
Nickel metal (H,T)	7440020	3.99E-06	9.58E-05	3.50E-02	2.10E-08
Toluene (H,T)	108883	5.44E-04	1.31E-02	4.77E+00	2.86E-06
Xylene (H,T)	1330207	3.79E-04	9.10E-03	3.32E+00	2.00E-06

Attachment 2
NSPS Subpart IIII and GACT Subpart ZZZZ Permit Condition for the
Non-emergency generator (ID No. ES-23)

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

Applicability [15A NCAC 02Q .0508(f), 40 CFR 60.4200(a)(2)(i)]

a. For this engine, the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," including Subpart A "General Provisions."

General Provisions [15A NCAC 02Q .0508(f)]

b. Pursuant to 40 CFR 60 .4218, The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 8 of 40 CFR 60 Subpart IIII.

Emission Standards [15A NCAC 02Q .0508(f)]

c. The Permittee shall comply with the emission standards for new nonroad CI engines in 40 CFR 60.4201 for the same model year and maximum engine power for this engine. [40 CFR 60.4204(b)]

Fuel Requirements [15A NCAC 02Q .0508(f)]

d. The Permittee shall use diesel fuel in the engine with:
   i. a maximum sulfur content of 15 ppm; and
   ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
   [40 CFR 60.4207(b) and 40 CFR 80.510(b)]

Testing [15A NCAC 02Q .0508(f)]

e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Sections 2.1 D.3.c and d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Compliance Requirements [15A NCAC 02Q .0508(b)]

f. The Permittee shall meet the following:
   i. operate and maintain the engines and control devices according to the manufacturer's emission related-written instructions over the entire life of the engine;
   ii. change only those emission-related settings that are permitted by the manufacturer; and
   iii. meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable.
   [40 CFR 60.4206 and 60.4211(a)]

g. The Permittee shall comply with the emission standards in Section 2.1 D.3.c by purchasing an engine certified to the emission standards in Section 2.1 D.3.c. The engine shall be installed and configured according to the manufacturer's emission-related specifications. [40 CFR 60.4211(c)]

h. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in Sections 2.1 D.3.f and g are not met.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

j. If the engine is equipped with a diesel particulate filter, the Permittee must install a backpressure monitor on the engine that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR 60.4209(b)]

k. If the Permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or if the Permittee changes

emission-related settings in a way that is not permitted by the manufacturer, the Permittee must demonstrate compliance by keeping a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 60.4211(g)(2)]

l. To ensure compliance, the Permittee shall perform inspections and maintenance on the engine as recommended by the manufacturer per 40 CFR 60.4206 and 40 CFR 60.4211(a). The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the engine;
   iv. any variance from manufacturer's recommendations, if any, and corrections made;
   v. if a PM filter is used, records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached [40 CFR 60.4214(c)]; and
   vi. documentation from the manufacturer that the engine is certified to meet the emission standards in Section 2.1 D.3.c.

m. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the monitoring in Sections 2.1 D.3 j through l is not conducted or the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

n. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 D.3.j through l above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance with the requirements of this permit shall be clearly identified.

4. 15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.6585, 6590(a)(2)(iii)]

a. For this source (a new stationary RICE located at an area source of HAP emissions) the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ, "National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

Stationary RICE subject to Regulations under 40 CFR Part 60 [15 A NCAC 02Q. 0508(f)]

b. Pursuant to 40 CFR 63.6590(c)(1), this source must meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR 60 Subpart IIII. No further requirements apply for these engines under 40 CFR 63 Subpart ZZZZ and Subpart A. If these requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.